

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 7, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer
SUBJECT: Lawrence Livermore National Laboratory (LLNL) Report for January 2020

Building 332 – Emergency Diesel Generator Seismic Testing: On January 2, 2020, Lawrence Livermore National Security, LLC, (LLNS) staff provided the report *Test Report for Seismic Testing of an Emergency Diesel Generator* to the Board’s LLNL cognizant engineer. Emergency Generator 332GDE04 was subjected to seismic qualification proof testing by National Technical Systems (NTS) on August 19–23, 2019, at the NTS facility in Huntsville, AL. Trained NTS staff completed the Safe Shutdown Earthquake (SSE) tests in accordance with IEEE Standard 344, *Seismic Qualification Test*, with LLNS representatives in attendance to witness the process. The generator satisfactorily performed its required safety function during and after SSE events. NTS staff noted minor damage at the generator/enclosure interface after seismic testing. This damage did not affect the structural integrity of the generator. NTS shipped Emergency Generator 332GDE04 back to LLNL where it is currently awaiting installation. On January 29, 2020, LLNS requested approval from the Livermore Field Office (LFO) to remove the old generator from service for up to 270 days, while remaining in Operation Mode, to complete the placement and testing of the new generator.

Periodic Issue Report (PIR): On January 7, 2020, LFO transmitted the PIR to LLNS. The PIR identified two deficiencies, one observation, and one strength. The deficiencies included missing steps in procedures for the packaging and handling of nuclear material, and LLNS not completing its self-assessment of the Fire Protection Program within the required time frame of “at least every three years.” LLNS entered these deficiencies and observations into its Issues Tracking System.

Waste Isolation Pilot Plant (WIPP) Transuranic Package Transporter II (TRUPACT-II) Loading Operations: On January 13, 2020, LFO approved the National Nuclear Security Administration (NNSA) Readiness Assessment (RA) Checklist for the Restart of the Waste Storage Facilities TRUPACT II Loading Operations at Area 625. The LFO Transuranic Waste Integrated Project Team (IPT) recommended removal of Core Requirements (CR) 2 (Functions, Assignments, Responsibilities, & Reporting Relationship), CR-3 (Selection, Training, & Qualification Programs), and CR-6 (Facility Safety Documentation) from the NNSA RA scope since these requirements had adequately been addressed and validated during the Contractor Readiness Assessment (CRA). On January 29, 2020, the LFO Senior Technical Safety Advisor approved the commencement of the NNSA RA, scheduled to begin on February 3, 2020.

Building 332 - Hydrogen Gas Control System (HGCS) and Hydrogen Gas Isolation System (HGIS): On January 14, 2020, LLNS provided LFO with revised page changes to the Building 332 Documented Safety Analysis (DSA) to remove restriction of operating the HGCS and HGIS in an alternate configuration. The DSA page changes incorporate the responses to LFO’s comments into the safety basis.

Fiscal Year 2020 Second Quarter Startup Notification Report (SNR): On January 15, 2020, LLNS submitted the second quarter fiscal year 2020 SNR to LFO for approval. Significant changes to the SNR include a change of status of the Hydrogen Gas System (HYDEC) operation back to Pre-Decisional and the submittal of the Recovery Glovebox Line (RGL) Readiness Assessment for approval. The RGL CRA is currently scheduled to begin in June 2020 with the NNSA RA commencing in August 2020.